

In the Specification:

The recombinase protein of the invention is preferably selected from the group of site-specific recombinases composed of the Cre recombinase of bacteriophage P1, the FLP recombinase of *Saccharomyces cerevisiae*, the R recombinase of *Zygosaccharomyces rouxii* pSR1, the A recombinase of *Kluyveromyces drosophilarium* pKD1, the A recombinase of *Kluyveromyces waltii* pKW1, the integrase λ Int, the recombinase of the GIN recombination system of the Mu phage, ~~or the~~ the bacterial β recombinase (Diaz *et al.*, 1999) or a variant thereof.

In the Claims:

1. (Currently Amended) ~~Metazoan organism, with the exception of humans, characterized in that A transgenic mouse, wherein~~ at least one cell of said ~~organism mouse~~ comprises at least:

- (i) one fusion protein comprising sequentially:
- a recombinase protein;
- a hinge region of at least 15 amino acids;
- a polypeptide comprising the ligand-binding domain of the human nuclear estrogen receptor, or of a vertebrate nuclear estrogen receptor, and their natural variants or one of their fragments, said polypeptide exhibiting at least one mutation relative to the wild-type form of said ligand-binding domains, or of their natural variants, or of their fragments,

said fusion protein having a negligible, or even zero, recombinase activity in the presence of a natural ligand and a recombinase activity induced by small quantities of synthetic ligand endowed with antiestrogenic activity;

- (ii) one or more gene or intergenic DNA sequences of interest naturally belonging to said genome of said ~~organism mouse~~ into which one or more recognition sites of said recombinase protein are inserted, said DNA sequence(s) of interest being located in one or more of the chromosomes of the genome of said cell.

2. (Currently Amended) ~~Organism Transgenic mouse~~ according to Claim 1, ~~characterized in that wherein~~ said recombinase protein ~~is preferably selected from the group of site-specific recombinases composed of the~~ ~~comprises~~ Cre recombinase of bacteriophage P1, ~~the FLP recombinase of Saccharomyces cerevisiae, the R recombinase~~